Testimony of Allan Rutter,
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before the
Subcommittee on Railroads,
Committee on Transportation and Infrastructure,
United States House of Representatives

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Chairman Quinn and members of the Subcommittee, I am very pleased to be here today to testify about the efforts of the Federal Railroad Administration (FRA) to protect and promote the security of our Nation's passenger and freight railroad network. On behalf of the Secretary of Transportation, FRA's mission is to oversee the safety of the U.S. railroad industry. Security has always been, and will continue to be, an integral part of our safety mission.

Like most Americans, I can vividly recall where I was and what I was doing on that tragic morning of September 11, 2001. I was in Chicago in the headquarters of Metra, the commuter rail authority that serves tens of thousands of Chicago area commuters every day. Standing in front of a television monitor, I watched in horror as four commercial jets were turned into weapons of destruction, the World Trade Center Towers collapsed, and the Pentagon burned. I also had the unique opportunity to witness firsthand the response of our rail industry to the terrorist attacks. Soon after the attacks began, Metra shifted its operations from an inbound rush-hour schedule to an outbound rush-hour schedule that enabled thousands of commuters to evacuate the city's many skyscrapers and return home to their loved ones.

It was no small feat for a major commuter railroad to reverse rush-hour operations on the spur of the moment. The reason that it happened as smoothly as it did is that the railroad was prepared and had an emergency response plan in place. It is worth noting that FRA issued a

regulation three years earlier that required the passenger railroads to have emergency response plans to deal with unforeseen safety and security emergencies.

The March 11th bombings of four commuter trains in Madrid, the subsequent discoveries of bombs under railroad tracks in both Spain and France, and the intelligence reports that terrorists might try to bomb rail lines and buses in major U.S. cities this summer all underscore the importance of planning, preparation, and coordination between government and the rail industry in dealing with terrorism. Providing for the security of our vast and varied rail transportation network requires detailed knowledge of security and intelligence matters, as well as a broad understanding of railroad infrastructure, motive power and equipment, personnel, information technology, and operations. To successfully mitigate the terrorist threat to our Nation's railroads, many Federal agencies must work together, sharing knowledge, expertise, ideas, and resources. FRA and our colleagues within the U.S. Department of Transportation (DOT) work with the Federal Government's lead department for transportation security, the Department of Homeland Security (DHS) and its various components, including the Transportation Security Administration (TSA), as well as with other security and intelligence agencies and other Federal agencies to enhance and assure railroad security. These agencies play a primary role in addressing transportation security, and FRA offers and provides extensive rail expertise to aid analyses of the impact that potential security threats may pose for the rail industry and to assess the effects of proposed security measures on railroad operations. Finally, we help to balance needs of security and safety, making certain that the two goals remain complementary, not contradictory.

STRATEGIES FOR SAFETY AND SECURITY

Railroad system safety and security are inextricably linked. This is logical insofar as basic transportation risk-reduction strategies that protect and promote safety are also effective in protecting and promoting security. In essence, FRA's safety strategies can be divided into three categories: (I) incident prevention through detection of hazards and deterrence of conduct that contributes to hazards; (II) casualty mitigation through design; and (III) casualty mitigation through emergency preparedness.

I. Incident Prevention through Threat Detection and Deterrence: Threat-Communication Networks. For FRA, incident prevention is predicated on detecting unsafe conditions and deterring safety violations before they can cause railroad accidents. While Federal regulations mandating the regular periodic inspection of railroad track, signals, and rolling stock have proven effective in reducing train accidents, even before 9/11 we recognized that inspection requirements and enforcement alone were not sufficient to detect the activities of terrorists who can strike without warning. Terrorist activities are best prevented by the sharing and dissemination of information among and between the intelligence and transportation communities

The Railway Alert Network: Prior to 9/11, and under the direction of the DOT Office of Intelligence and Security, FRA worked with the Association of American Railroads (AAR) to establish a railroad security communications network, known as the Railway Alert Network (RAN), to alert the railroad industry to potential security threats and to notify DOT immediately about security-related developments that occur on our Nation's railroads. Using this communications network, FRA received information from the DOT Office of Intelligence and

Security regarding potential security threats and disseminated that information to the AAR, railroad police agencies, and other relevant railroad security offices. The railroads, in turn, notified FRA about security measures taken to deal with those threats. Railroads also utilized the network to inform FRA about security-related incidents that could impact railroad operations or infrastructure. A network of designated FRA personnel has been available 24 hours a day, seven days a week to receive this information and disseminate it to senior DOT/FRA leadership, railroad police, and national security agencies.

Other Threat-Communication Networks: The RAN has been strengthened significantly since 9/11 and has benefitted from increased investment by the AAR and DOT. The RAN is now linked to the AAR's Operations Center and to the Surface Transportation Information Sharing and Analysis Center (ST-ISAC), operated by DHS in partnership with the AAR and the American Public Transportation Association (APTA), which provides a robust capability to collect, analyze, and disseminate information about threats to critical physical and cyber infrastructure. In addition, DOT has established a Crisis Management Center, which is also staffed 24/7 and is linked to the RAN, to better disseminate security threat information throughout government and the transportation industry.

II. Casualty Mitigation through Design: Passenger Car and Tank Car Safety Standards. The ability to withstand an incident is an important component of any strategy designed to enhance safety and security. Historically, FRA has pursued this strategy by promulgating crashworthiness standards for both passenger and freight railroad equipment. For example, in 1998 FRA issued the first-ever passenger equipment safety standards establishing comprehensive design, structural strength, and fire safety standards for railroad passenger cars.

These standards are intended to protect the passengers in these vehicles from some of the tremendous forces that can be generated in train accidents. The regulations also establish requirements for emergency egress and emergency lighting to facilitate rapid evacuation in the event of an accident or emergency. There are additional elaborate and stringent Federal safety standards for railroad tank cars that carry hazardous materials. Tank car standards are promulgated by DOT's Research and Special Programs Administration (RSPA). FRA works closely with RSPA and with tank car manufacturers, shippers, and railroads, to provide expertise and input into the development of the tank car standards, and we are responsible for the administration and enforcement of these regulations.

Safety statistics bear out the effectiveness of these crashworthiness standards. In the year 2003, for example, nearly 500 million passengers traveled on our Nation's railroads, yet, despite the 161 passenger train accidents that occurred that year, none resulted in a single rail passenger fatality. Also, 2003 saw the lowest number of hazardous materials releases on record: with nearly two million tank car shipments of hazardous materials that year, only 24 train accidents resulted in a release of product, and in many cases the release was minimal, consisting of only a few gallons. While these crashworthiness standards were intended to protect railroad passengers and to prevent the release of hazardous materials from the tremendous, destructive forces of a train accident, they also equally applicable to terrorist-induced incidents. We are constantly reassessing the adequacy of these measures and, under the leadership of our partners at DHS, are exploring additional options to enhance the security of rail vehicles and infrastructure.

III. Casualty Mitigation through Emergency Preparedness: Emergency Response **Regulations.** FRA does not rely on prevention and crashworthy design alone as strategies for dealing with the terrorist threat to the rail network. Well before 9/11 we understood that it was imperative for railroads to develop and implement effective emergency response plans to respond to unanticipated security emergencies. On May 4, 1998, FRA published Passenger Train Emergency Preparedness regulations that require passenger and commuter railroads to have emergency response plans in place to deal with potential emergencies, including securityrelated emergencies. The regulations, which remain in effect today, also require these railroads to train their employees about their roles and responsibilities in carrying out emergency response procedures under the plan; to inform, and provide training materials to, the local emergency responders (police and firefighters) who respond to railroad emergencies on behalf of local communities; and to conduct periodic large-scale emergency response drills in conjunction with these emergency responders. We believe that the emergency response plans that commuter and passenger railroads had in place pursuant to this regulation played a significant role in helping these entities respond quickly and effectively to the events of 9/11.

Earlier, I described the actions of Chicago's Metra on 9/11, but an even more striking example of the use of effective emergency response procedures occurred at the Port Authority Trans-Hudson (PATH) commuter rail station located in the basement of World Trade Center. Within minutes after the planes struck the towers, alert PATH officials sprang into action, implementing emergency procedures that sent arriving trains through the station without stopping, removing the passengers from harm's way. Further distant approaching trains were rerouted away from the station entirely, and passengers who were already in the station itself

were quickly evacuated. Because of the quick action and flawless execution of a well-thoughtout emergency response plan, 5,000 railroad passengers were evacuated from the basement of the World Trade Center in a matter of minutes, possibly preventing many more tragic deaths. The railroad had staged an emergency response drill with local emergency responders just weeks before 9/11.

PASSENGER RAIL SECURITY INITIATIVES

We recognize that while FRA's pre-9/11 security measures for incident prevention and casualty mitigation appeared adequate at the time, our understanding of the terrorist threat has changed dramatically since 9/11, and we, along with all other government agencies, are reexamining our basic assumptions about railroad security and working to enhance rail security measures. As I noted earlier, FRA works with many other Federal agencies to improve rail security. One of our closest partners is the Federal Transit Administration (FTA). During the past nearly three years, FTA has aggressively helped to assess the security risks on commuter railroads and other major transit agencies. FTA funded security risk assessments for the 50 largest transit agencies in the Nation, which included the ten largest commuter railroads under FRA's safety jurisdiction. FRA participated in all of the security risk assessments on those ten commuter railroads and contributed the funding for three of those risk assessments.

FTA also developed a tool kit of best practices that could be incorporated into commuter railroad security plans to prevent and respond to terrorist incidents. FRA also participated in this FTA initiative, contributing our knowledge of commuter rail operations, infrastructure, and organization to ensure that the security enhancement measures contained in the plans were sound and feasible in a railroad environment.

Further, FTA provided funding for commuter railroads railroads to conduct security simulations or drills, based on terrorist scenarios. For example, the New York City Metropolitan Transportation Authority received an FTA grant to conduct such drills- for the Long Island Rail Road, the Metro-North Commuter Railroad, and Long Island-Bus. FRA staff worked closely with many of the railroads that received this funding, to plan and assist in the drills.

Finally, FTA sponsored a series of 17 workshops across the country (called "Connecting Communities") to bring together transit agencies, emergency responders, and State and local government leaders so that they might better coordinate their security plans and emergency response efforts. FRA devoted staff with both railroad knowledge and facilitation skills to help with these workshops.

FRA has also utilized our enforcement resources to periodically monitor the implementation of the security plans on the commuter railroads. Shortly after the recent terrorist bombings of trains in Madrid, in cooperation with DHS, I ordered our regional offices to conduct multi-day team inspections of each of the 18 commuter railroads and of Amtrak to determine what additional security measures had been put into place to prevent a similar occurrence in the United States. Nearly 200 of FRA's 415 inspectors participated in this effort.

What they found was that the most heavily traveled commuter systems, terminals, and stations had the most extensive security measures and had done the most to enhance security measures since the Madrid bombings. Among the measures that have been put into place to deal with the elevated threat are the following: increased and better focused police surveillance; enhanced coordination between railroad police and other law enforcement agencies; better and more frequent security exercises; more frequent use of bomb-sniffing dogs to detect explosives;

more frequent security sweeps of trains and terminals; measures to keep car bombs away from station buildings; and efforts to prevent unauthorized access to train platforms, rail yards, and passenger car maintenance and cleaning facilities. The commuter railroads are also providing more frequent notices and job briefings to their employees, instructing them about how to be more vigilant in identifying suspicious persons and packages. Many commuter railroads are also making frequent public service announcements or handing out printed material to warn passengers to be on the lookout for suspicious packages and people.

To be sure, our inspectors also found many locations where not all of the railroad security measures prescribed in the railroads' plans had been put into practice. Some of the most frequent concerns involved failure to notify railroad personnel about their roles and responsibilities in executing the railroad security plans. There were locations where passengers were not informed about how to be more vigilant. Another concern was the failure to control unauthorized access to rail cars and railroad car repair facilities. When our inspectors found security gaps, we brought those items to the attention of the senior railroad managers for resolution.

Our experience on the commuter railroads was mirrored on Amtrak, where we found that the most extensive security measures had been implemented in the busiest stations and terminals and on the most heavily used rail lines. We also brought to the attention of Amtrak management those locations where the company's security measures had not been fully implemented.

In cooperation with DHS, we are also working with Amtrak to help it enhance its security plan and improve its strategic security planning capacity. Over the past few years we have reviewed and commented on many of the individual security initiatives that Amtrak had

proposed. Recently, we contracted with the Rand Corporation to conduct a systematic review and assessment of Amtrak's security posture and current programs, focusing on the adequacy of preparedness for combating terrorist threats. The objectives of the review include an assessment of the corporate security strategic planning processes and of products relating to security. Rand is evaluating Amtrak's risk management, response planning, and information dissemination actions that relate to system security and counterterrorism actions. The results and recommendations of the Rand review are intended to help Amtrak implement a nationwide, comprehensive, integrated system security plan and program.

We wish to point out to the Subcommittee that the enhanced security measures instituted by the passenger railroads are threat-based. That is, FRA and the railroads have diverted resources from normal activities to deal with the perceived increase in security threats brought about by the Madrid bombings. DHS is considering specific actions it might take to enhance passenger rail security, and FRA will work with DHS on reaching a specific agreement concerning how FRA may be able to assist DHS's initiatives.

FREIGHT RAIL SECURITY INITIATIVES

Security Initiatives regarding Rail Freight Generally

On September 20, 2001, I conducted an industry-wide teleconference with representatives from all major freight, passenger, and commuter railroads, all rail labor organizations, and the FTA to discuss how the industry should proceed to reexamine railroad security options in the aftermath of the 9/11 attacks. Shortly after the teleconference, the AAR announced that it had contracted with EWA Information and Infrastructure Technologies, Inc., a firm with 1,000 employees specializing in security and intelligence, to conduct a comprehensive

security risk assessment of the railroad industry. Furthermore, the rail industry announced the formation of six Critical Action Teams (CATs) to examine railroad security in the following areas:

physical assets (bridges, tunnels, major yards, etc.);
 information technology systems (including dispatching systems);
 chemical and hazardous materials;
 Department of Defense shipments;
 train operations; and
 rail passenger systems and human factors.

The first five CATs concentrated on freight railroad security vulnerability issues. Each of these was led by a top railroad operating officer and was staffed by representatives from railroads, the AAR, and The American Short Line and Regional Railroad Association (ASLRRA). The sixth CAT focused on passenger rail security issues and was led by the American Public Transportation Association (APTA) and was later included in the FTA efforts mentioned earlier.

Based on the rail industry's security risk assessment and the work of the CATs, the freight railroad industry developed a security plan that DHS will review and oversee. Much as we have done in the passenger security arena, FRA has periodically utilized its safety inspectors to monitor implementation of security measures in response to heightened threats. As early as November 1, 2001, I directed our safety inspectors to spend several days monitoring the state of security at major freight railroad facilities, including bridges, tunnels, dispatching centers, major

yards, and hazardous materials storage areas. Again, these security monitoring inspections are not our regular business; rather, they are narrowly targeted and threat-based.

Security Initiatives Regarding Railroad Shipments of Hazardous Materials

One area of freight railroad security where FRA has been very active is the security of rail shipments of hazardous materials. We have worked extensively with TSA before and after its transfer to DHS, with other components of DHS, with RSPA, and other entities to ensure that the nearly two million tank car shipments of hazardous substances that occur each year are transported with the optimum level of security.

Hazardous Materials Security Plans: One of our primary roles in protecting the security of hazardous materials shipments is our administration and enforcement of the RSPA regulation that requires hazardous materials shippers and carriers to develop, implement, and update written security plans. Companies that ship or transport specified amounts of certain placarded commodities must conduct a security risk assessment of their hazardous materials operations and develop appropriate measures to mitigate the security risks identified. For example, the security plans must describe the measures that are in place to guard against unauthorized access and to protect the security of these shipments while in transit and also while in storage. The regulation also directs hazardous materials shippers and transporters to provide training to their employees who are responsible for implementing the security plan. Such employees must be trained to understand their specific roles and responsibilities in carrying out the security plans. The regulation required that these security plans be in place by September 25, 2003. FRA is in the process of training its hazardous materials safety inspectors to review, and monitor compliance

with, the security plans. We are working with RSPA and DHS to develop a program for evaluating how effectively these plans are being carried out on the railroads.

Options to Enhance Hazardous Materials Security: RSPA is also exploring additional options to enhance hazardous materials security. RSPA recently completed a study of the most hazardous commodities that move in transportation, commodities that are classified as toxic by inhalation (TIH). FRA provided input into this study from a rail perspective. Based on the issues identified in the TIH study, DOT is working with DHS and the Homeland Security Council to identify prudent steps to enhance the security of TIH shipments. Over the past three months, I have participated in frequent meetings at DHS headquarters with representatives from DHS, RSPA, and DOT's Office of Intelligence and Security to provide input into these options and to help assess their impact on the security, safety, and efficiency of the freight railroad transportation system.

Our agency is also participating in joint efforts to conduct a review and security risk assessment of hazardous materials shipments through major metropolitan areas for the purpose of preventing potential terrorist attacks involving these commodities. Earlier this year, I joined DHS representatives in meeting with leaders from the City Council of Washington, DC, and representatives from the Mayor's office, the police department, and the fire department to discuss plans to carry out a risk assessment of hazardous materials rail shipments in Washington, DC. That assessment is currently underway, and three FRA rail safety and security experts are participating on the risk assessment team. We hope that this effort will serve as a precursor and

model for similar risk assessments in other metropolitan areas that have significant amounts of hazardous materials shipments.

Positive Train Control's Potential for Enhancing Hazardous Materials Security: Another technology that holds tremendous promise for enhancing rail security in general and hazardous materials security in particular is Positive Train Control, or PTC. PTC uses state-of-the-art microprocessors, global positioning satellite technology, data radio networks, and sophisticated train control and train dispatching computer software that allows for centralized monitoring and control of the movement and speed of trains across an entire railroad line or network. With PTC, a centralized dispatching center would know the exact location of every train on the system and could, with a few key strokes, identify each and every hazardous materials shipment on any train. While PTC was designed to improve the safety and efficiency of rail operations, it can easily be adapted to provide security benefits. For example, if a terrorist were to attempt to commandeer a train and initiate an unauthorized movement, the PTC system would detect it and automatically stop the train. FRA and the railroad industry are in the process of deploying a revenue service demonstration project of PTC technology between St. Louis and Chicago to demonstrate the many potential benefits that PTC can offer. FRA has several research and development projects underway to develop security-related technologies that can be made to work in conjunction with PTC.

FRA RESEARCH AND DEVELOPMENT PROJECTS ON RAIL SECURITY

Security programs supported by FRA's Office of Research and Development (OR&D) have the following five goals: (1) to ensure that people and goods move safely and securely on the

Nation's railroad infrastructure; (2) to evaluate and improve the integrity and behavior of tank cars and passenger cars for safety and security purposes; (3) to develop and demonstrate efficient and reliable communication systems to warn of security breaches; (4) to assist the TSA and commuter railroads with security issues and initiatives; and (5) to evaluate security technology for protecting railroad passengers, equipment, and infrastructure. Several such security projects are underway or completed. Five of them are described below:

- 1) *Tank Car Security Evaluation*. This joint project between FRA OR&D and DHS was designed for two general purposes: (a) to evaluate the ability of hydrophones inside tank cars to detect tank car breaches and to distinguish them from other background noise such as found in the normal tank car operating environment and (b) to develop emergency response techniques, tools, and procedures to plug punctures in pressure tank cars caused by small arms fire or other means. This project was conducted in October 2003 at the Transportation Technology Center, Inc., in Pueblo, Colorado. A confidential report will be complete by the end of 2004.
- 2) Transportation Security Situation Display (TSSD). This developmental activity began in 2003. Currently sponsored by FRA, the project involves a public-private partnership among the John A. Volpe National Transportation Systems Center (Volpe Center), the City of New York Office of Emergency Management, and Silicon Graphics Federal, Inc. The TSSD is intended to aid first responders in allocating their resources by providing on a computer monitor a visually displayed map of a localized area where there is a security situation, a

natural disaster, or a weather-related disruption.

- 3) Railcar Inspection Guide (RIG). The RIG is a booklet, developed jointly by FRA, TSA, and the Technical Support Working Group of the U.S. Department of Defense. It will be distributed on a need-to-know basis and used to assist military personnel, railroad police, local law enforcement, and first responders in inspecting locomotives, passenger cars, and freight cars for indicators of security problems. The booklet shows, for example, places on rail equipment where weapons of mass destruction could be hidden. FRA provided technical expertise, guidance, and project management in the development of the RIG. The RIG is currently in the final stages of publication.
- 4) Real-Time Passenger Car Manifest. This project, which addresses a National Transportation Safety Board recommendation, is aimed at providing first responders with accurate passenger counts. The Volpe Center is currently performing a study to define the options and feasibility of developing and implementing a real-time passenger manifest, including options involving the use of computers.
- 5) Explosive Detection Technologies. In 2001, FRA OR&D worked with Amtrak, the Federal Aviation Administration, and the Office of the Secretary of Transportation in evaluating the use of trace explosive detection devices on a variety of passenger equipment. These devices are able to detect residue from explosives.

The FRA Office of Research and Development will continue to partner with DHS on current

and planned security initiatives. Both before and after the Madrid bombings, FRA has been discussing research efforts to focus on the vulnerability of passenger cars to the use of explosives by terrorists; this research would model and measure the effects of the detonation of various quantities of energetic material on railroad passenger cars and evaluate the means needed to ensure that commerce resumes at the earliest possible moment after an attack.

NEED FOR RAIL SECURITY LEGISLATION

The Subcommittee has asked me to address "[a]ny deficiencies or obsolete features of current law that should be corrected to improve preparedness, enforcement and deterrence in the field of rail security." While FRA and other Federal agencies will continue our efforts to safeguard our railroads and mass transportation systems, the enactment of clearer and stronger Federal laws is also necessary.

First, DOT seeks to clarify that the Secretary of Transportation's broad authority over every area of railroad safety includes the authority to address threats to rail security. FRA believes that its current authority inherently includes security, and that such a clarifying amendment could help FRA preempt and quickly rebuff any judicial challenges to FRA safety rules and orders that are issued to enhance rail security. FRA proposed such an amendment in the Administration's rail safety reauthorization bills transmitted to the Congress in July 2002 and July 2003. A comparable provision was passed by the Senate in November 2003 (section 205(b) of the Rail Safety Improvement Act (S. 1402)), and a similar provision was approved by the Senate Commerce Committee in July 2004 (section 8(b) of the Rail Security Act of 2004 (S. 2273)). (The latter bill also contains other rail security provisions, some of which DOT supports at least to some degree, as stated in DOT's views letter, which is attached.)

Second, it is necessary to strengthen and clarify Federal criminal laws to deter terrorist attacks and other violence against railroads and mass transportation systems and to ensure that any attacks that do occur are properly punished. Currently, the wrecking trains and mass transportation anti-terrorism statutes (18 U.S.C. 1992-1993, respectively) contain eight gaps or ambiguities that the Railroad Carriers and Mass Transportation Protection Act of 2004 (H.R. 4143 and S. 2289) would remedy. These bills would combine the existing statutes into a new and more comprehensive section 1992. For example, the legislation would extend to railroads the comprehensive protections that apply to mass transportation systems under the mass transportation statute. While the mass transportation statutory prohibitions clearly apply to attacks against commuter railroads, and arguably apply to Amtrak and tourist railroad operations as well, the massive freight railroad operations of this country are not covered. The vulnerabilities of freight shipments—whether spent nuclear fuel or other hazardous materials need to be addressed to better protect the general public. FRA and the Federal Transit Administration have worked very closely with the U.S. Department of Justice since 1997 in trying to secure the passage of similar legislation. DOT submitted anti-terrorism bills in 1997, 1999, and 2002, each of which contained many of the central provisions of H.R. 4143 and S. 2289. DOT's legislative proposals formed the basis for the mass transportation statute, which was first enacted as part of the USA PATRIOT Act in 2001. Details on these important improvements in existing Federal criminal law that would be achieved under H.R. 4143 and S. 2289 are found in FRA's April 8 testimony before the Senate Judiciary Committee, a copy of which is attached.

CONCLUSION

With the rest of the senior leadership team at DOT, I am driven in this effort to improve transportation security by the relentless pursuit of this goal by Secretary Norman Mineta. His actions on September 11 to protect the flying public, his stewardship of the creation of the TSA, his leadership in transitioning TSA and Coast Guard to the DHS, all are accomplishments which provide all of us at DOT a high standard by which to gauge our own efforts.

We welcome the attention of this subcommittee and your interest in making further progress. We are ready to work with you in bringing about an even safer and more secure rail transportation system. Thank you for the opportunity to appear before your subcommittee.

Attachments:

- DOT views letter on S. 2273
- Testimony by S. Mark Lindsey, Chief Counsel, FRA, before the Senate Judiciary Committee on April 8, 2004